City of Cardiff Education Committee.

ANNUAL REPORT

FOR 1920

OF THE

SCHOOL MEDICAL OFFICER.

EDWARD WALFORD, M.D., D.P.H.,

School Medical Officer, Cardiff Education Authority;
Medical Officer of Health, City and Port of Cardiff.

CARDIFF:
S. GLOSSOP AND SONS, LTD., NEW STREET.

1921.

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CITY OF CARDIFF.

Education Committee.

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ALDERMAN H. M. THOMPSON, M.A., J.P.

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Miss Mabel Howell.
Mr. George Clarry.
Mr. Walter Thomas.
Principal A. H. Trow, D.Sc.

Medical Inspection Staff.

(December, 1920).

School Medical Officer :

Edward Walford, M.D., D.P.H.

Assistant School Medical Officers :

Herbert Sheasby, M.B., Ch.B., D.P.H.
Elsie Stansfeld, M.B., B.S.
Mary I. Adams, B.Sc., M.B., Ch.B.

Specialists—School Clinic :

Oculist : J. W. T. Thomas, M.B., Ch.B., M.R.C.S.
Aural Surgeon : J. O. Wade, M.B., B.S., F.R.C.S.
Dentist : C. J. Hurry Riches, L.D.S. (Eng.)
Anæsthetist : Erie Evans, M.B.

School Nurses :

Agnes C. Brodie.
Ellen Whiting.
Francis H. Jones.
Indiana P. Ebbett.
Phœbe A. Johns.
W. Brodie.
L. Ball.

Clerks :

Lily Mellings.
Matthew Raymont.

19 NOV 1969

CITY OF CARDIFF EDUCATION COMMITTEE.

CITY HALL,
CARDIFF,
May, 1921.

TO THE CHAIRMAN AND MEMBERS OF THE CARDIFF EDUCATION COMMITTEE.

LADIES AND GENTLEMEN,

I have the honour of submitting my Annual Report upon the Medical Inspection and Treatment of School Children for 1920.

At the end of the year the Staff in the Medical Department comprised the following:—The Medical Officer of Health, acting as Chief Medical Officer, Dr. Herbert Sheasby, Dr. Elsie Stansfeld, and Dr. Mary Adams, assisted by seven School Nurses. Dr. Leighton Davies had charge of the Eye Clinic until the end of August, 1920, when Dr. J. W. T. Thomas was appointed in his place. Mr. J. O. Wade was in charge of the Nose and Throat Clinic. Mr. C. J. Hurry Riches resigned his appointment in August, 1920, and the Committee decided to appoint a whole-time Dentist in his place. Mr. D. W. Elliot was appointed to this post, and commenced his duties on the 1st April, 1921, so that for six months no dental treatment was carried on in the Clinic.

The following is a complete list of the Public Elementary and Secondary Schools under the control of the Cardiff Education Authority, together with the accommodation in each Department.

ELEMENTARY SCHOOLS.

NAME OF SCHOOL	ACCOMMODATION.			
	BOYS	GIRLS	MIXED	INFANTS
Adamsdown Council	390	360	...	271
Albany Road Council	560	568	...	449
Allensbank Council	400	400	...	400
Court Road Council	380	380	...	424
Crwys Road Council	392	385	...	430
Eleanor Street Council	...	...	315	182
Gladstone Council	440	440	...	462
Grangetown Council	522	522	...	564
Kitchener Road Council	372	372	...	350
Lansdowne Road Council	456	456	...	534
Marlborough Road Council	440	440	...	410
Moorland Road Council	626	626	...	646
Ninian Park Council	440	440	...	330
Radnor Road Council	541	541	...	475
Roath Park Council	380	380	...	443
Severn Road Council	598	584	...	542
South Church Street Council	...	...	343	150

ELEMENTARY SCHOOLS—con.

NAME OF SCHOOL	ACCOMMODATION.			
	BOYS	GIRLS	MIXED	INFANTS
Splotlands Council	596	544	...	596
Stacey Road Council	422	402	...	349
Wood Street Council	410	347	...	228
Canton National	...	218	...	154
Cathays National	...	...	162	125
Croft Street National	...	...	...	230
Grangetown National	...	...	155	105
Metal Street National	183	183	...	194
St. John's National	236	193	...	146
St. Mary's National (Bute Terrace)	224	144	...	120
St. Mary's National (Clarence Road)	...	...	288	160
St. Mary's Mission National	...	...	146	127
St. Monica's National	...	...	230	138
Tredegarville National	174	163	...	195
St. Alban's Roman Catholic	...	...	245	271
St. Cuthbert's Roman Catholic	...	...	180	95
St. David's Roman Catholic	340	420	...	230
St. Mary's Roman Catholic	...	...	217	161
St. Patrick's Roman Catholic	...	...	306	220
St. Peter's Roman Catholic	288	290	...	230
TOTALS	9,810	9,798	2,567	11,136

SECONDARY AND HIGH SCHOOLS.

NAME OF SCHOOL	ACCOMMODATION.		
	BOYS	GIRLS	MIXED
Cardiff High School	300	350	...
Howard Gardens Municipal Secondary	390	360	...
Canton Municipal Secondary	250	250	...
Technical and Commercial School	...	...	190
TOTALS	940	960	190

During the war, owing to the depletion of the staff, it was found impossible to carry out the whole of the inspections required by the Regulations, but in 1919 and 1920 this routine work was undertaken in its complete form. It was also found possible to commence the inspection of Secondary and High Schools as required by Section 18 of the Education Act, 1918, and the children attending these Schools have been given the same facilities for medical treatment as those attending Elementary Schools. Many of them have availed themselves of the treatment provided by the Education Authority in the School Clinics.

Three groups of children have been inspected during the year in the Elementary Schools.

(*a*) All children admitted to school in the year.

(*b*) All children between 12 and 13 years of age, together with children over 13 years of age who have not already been examined after reaching the age of 12 years.

(*c*) All children between 8 and 9 years of age.

According to the numbers of children on the school registers in the year 1920, these three groups of children total about 11,000, which is the number for which provision is made in the routine medical inspection in schools. In addition to these there are children who require "special" medical inspection at the Inspection Clinic at the City Hall. The accommodation in the Special Schools is as follows :—

(*a*) School for the Blind...	...	...	30
(*b*) Oral School for Deaf	...	...	40
(*c*) School for Defective	...	...	50

Education Act, 1918.

The Education Act of 1918 gives the Local Education Authority the same powers with reference to making provision for the medical inspection and treatment of children and young persons attending Secondary Schools, High Schools, Continuation Schools, and other Schools or Educational Institution provided by them, as they have with reference to children attending Public Elementary Schools, and by the same Act, the Authority has the same duty as regards the education of Physically Defective and Epileptic Children as they have with reference to the Education of Mentally Defective Children, under the Elementary Education (Defective and Epileptic Children) Act, 1914. Briefly, these duties comprise : (1) The ascertainment of the defect ; (2) The determination of educability or otherwise ; (3) The provision of educational facilities.

There is much need in this district, as in other districts, for suitable provision for the education in Residential Institutions of Mentally and Physically Defective Children, and there is also room for improvement in the arrangements for dealing with Mentally Defective Children in the Special Classes set apart for the purpose.

Following Up.

Much good work has been done by the Medical Officers, School Nurses, and Head Teachers, and also by the Attendance Officers, in following up children found at medical inspection to be suffering from physical defect or illness of any kind, with a view to securing adequate medical treatment in each case. The co-operation of the Teachers has been particularly valuable in this respect, as their opportunities for helping in this work are considerable. The attached tables show the number and nature of the defects found in the inspection of the children. From these, it will be seen that 13,944 were examined. In the case of 1,857 children, medical treatment was recommended ; as a result of following up, it was found that 1,090 of these children received the necessary medical treatment.

All defects requiring treatment are recorded on the medical inspection schedules, and the parents are notified if their children require treatment, and the importance of receiving proper treatment is emphasized. A following up card is made out for each case, and handed to the School Nurse concerned, who visits the homes of the children, and impresses upon parents the need for treatment. Cases of minor ailments (*i.e.* ringworm, impetigo, other skin disorders, external eye diseases, etc.) requiring regular and extended domiciliary or other treatment, are followed up and treated under medical supervision by the Nurses of the Queen Victoria Jubilee Nurses' Institute. These Nurses have, as usual, rendered invaluable assistance to the Medical Service of the Education Authority.

Children suffering from Tuberculosis, or suspected Tuberculosis, are referred by the Medical Officers to the Tuberculosis Physician of the Welsh National Memorial Association. During the year 1920, the School Nurses followed up 5,369 new cases, and made altogether, 7,025 visits to the houses of children. The Jubilee Nurses paid 3,385 visits.

Treatment.

The Education Committee have from time to time had under consideration the arrangements made to recover from parents under the Education (Administration Provisions) Act, the cost of medical and dental treatment of children attending the schools under their control, and have also taken steps to complete generally the arrangements for attending to the health and physical condition of school children, in view of the fact that the Education Act of 1918 imposes this duty upon Local Education Authorities. Such arrangements are no longer optional, but must be made subject to the sanction of the Board of Education.

Much of the time of the School Medical Service is now taken up in securing the adequate treatment of children who were found on medical inspection to require such treatment.

The value of the School Clinics is becoming more and more obvious, and the completion and extension of the facilities for this form of treatment are urgently needed. The details of the arrangements are indicated on the attached forms (see page 9), and it will be noticed that in certain necessitous cases, the charges are wholly remitted, when after careful inquiry, the parents are found to be unable to pay any fee whatever. In most cases, a small charge for treatment is made, and the amounts are collected at the Clinics by the School Nurses and Clerks in attendance.

During the year, further facilities for treatment have been provided by an extension of the accommodation for School Clinic work. Premises have been taken jointly by the Education Committee and the Maternity and Child Welfare Committee of the Sanitary Authority in Glossop Terrace. Rooms have been adapted and equipped for the work which is carried out by both these Authorities. The Dental Clinic has been entirely removed from the City Hall, in which the accommodation was quite inadequate, and transferred to Glossop Terrace, and will in future be in charge of the whole-time School Dentist, recently appointed. These rooms, although ready, were not actually in use during the year under consideration, as accidental circumstances prevented the appointment of this Officer until 1921. The Eye Clinic, Nose and Throat Clinic, and the Clinic for Minor Ailments, are still retained in rooms in the City Hall. Arrangements have now been made, whereby the services of the School Medical Officers have been utilised at all these Clinics, in addition to the work carried out by the Specialists in these departments. More time is, therefore, set apart for treatment than was possible under the previous conditions, and the list of children awaiting treatment has been reduced to very small dimensions.

The following tables give the arrangements for the School Clinics as at present constituted :—

School Clinic, City Hall.

Monday	Morning ...	Ear, Nose and Throat Clinic (Dr. Stansfeld).
	Afternoon ...	Eye Clinic (Dr. Sheasby).
Tuesday	Morning ...	Eye Clinic (Dr. Sheasby).
	Afternoon ...	
Wednesday ...	Morning ...	Eye Clinic (Dr. Thomas and Dr. Sheasby).
		Minor Ailments Clinic (Dr. Griffiths).
	Afternoon ...	
Thursday ...	Morning ...	Minor Ailments Clinic (Dr. Stansfeld).
	Afternoon ...	Minor Ailments Clinic (Dr. Sheasby).
Friday	Morning ...	Operations (Ear, Nose and Throat), Dr. Wade.
	Afternoon ...	

DENTAL SCHOOL CLINIC, GLOSSOP TERRACE.

MONDAY	Morning ...	Treatment (Extractions and Fillings).
	Afternoon ...	
TUESDAY	Morning ...	Treatment (Extractions and Fillings).
	Afternoon ...	Treatment (Extractions and Fillings).
WEDNESDAY ...	Morning ...	
	Afternoon ...	Treatment (Extractions and Fillings).
THURSDAY... ...	Morning ...	Operative Treatment.
	Afternoon ...	
FRIDAY	Morning ...	Treatment (Extractions and Fillings).
	Afternoon ...	Treatment (Extractions and Fillings).
SATURDAY... ...	Morning ...	Treatment (Extractions and Fillings).

(Front.)

CITY OF CARDIFF EDUCATION COMMITTEE.

SCHOOL CLINIC.

APPLICATION FOR :—
(*a*) Dental Treatment.
(*b*) Treatment (Ear, Nose or Throat Defects).

From the Parent or Guardian of.....
Age..... Address.....
School..... Department.....

To the SCHOOL MEDICAL OFFICER,
CARDIFF.

I desire to apply for (here state form of treatment required).....
for the above-mentioned child, and submit the following particulars for the consideration of the Education Committee :—

Parent's or Guardian's Occupation.....
Where employed.....
Number of family residing at home (including parents).....
Weekly earnings of Father.....
Weekly earnings of Mother.....
Weekly earnings of Children .....
Rent of House.....

I hereby declare that the answers on this Form are true and accurate in all respects, without any omission.

Date..... *Signed*.....

When filled in return this form to :—
THE SCHOOL MEDICAL OFFICER,
CITY HALL, CARDIFF.

(Back.)

CITY OF CARDIFF EDUCATION COMMITTEE.

SCHOOL CLINIC.

According to the provisions of the Education Authorities (Medical Treatment) Act, 1906, parents will be called upon to pay for treatment at the School Clinic if they can afford to do so.

SCALE OF CHARGES FOR OPERATIVE TREATMENT OF NOSE, THROAT AND EAR DISEASES.

Weekly Income of Family.	*Charges.*
Less than £2	...No Charge
£2 and less than £3	2/6
£3 and less than £4	5/–
£4 or more	10/–

SCALE OF CHARGES FOR DENTAL TREATMENT.

When the total weekly income of family is less than £3 Dental Treatment is given *free of charge.*

When the total weekly income of family is £3 or more, the following charges will be made :—

Extractions (under anæsthetic) ... ... 6d. each tooth.
(Total charge will not exceed 2/6.)

Stopping of Teeth ... ... 1/– each tooth.
(Total charge will not exceed 4/–.)

EDWARD WALFORD,
School Medical Officer.

CITY HALL,
CARDIFF.

Defective Vision.

It will be seen from attached tables that the work in the Eye Clinic has been considerably extended and includes three half-days instead of one half-day per week. This has been rendered possible by Dr. Sheasby taking two half-days in addition to the one half-day taken by Dr. Thomas, the Eye Specialist. In this way, a very large proportion of the Eye Defects found on inspection will be satisfactorily dealt with.

The work in the Ophthalmic Clinic not only includes the examination of the eyesight by the Ophthalmic Surgeon, with the prescription of suitable spectacles and adequate treatment, but also provides for the following up by the School Nurses until the completion of the treatment.

Arrangements have now been made for the attendance at each Eye Clinic of an Optician approved by the Education Committee who fits and supplies each patient with the necessary spectacles prescribed by the Surgeon. A large proportion of the children obtain these at and through the agency of the School Clinic at reduced prices. By this method, practically all children are kept under continuous observation and obtain the spectacles which are prescribed.

Special classes should be provided for children suffering from myopia (short sight), in order to prevent the use of the eyes in close work. Unless some preventive measure of this sort is carried out, this condition may lead to greatly impaired vision. The attached tables give the details and results of the inspection and treatment of eye defects.

Enlarged Tonsils and Adenoids.

In the routine and special inspection of school children during the year, it was found that about 6 per cent. suffered from enlarged tonsils or adenoids. Experience has shown the extreme necessity of a careful re-examination of all such children, in order that a selection should be made of the most suitable cases for operative treatment. This procedure is now adopted and a further extension of the work in this Clinic has been effected by which a large number of cases of this kind have been dealt with. Formerly, only one half-day per week was devoted to the treatment of these disorders by the Specialist, Mr. J. O. Wade, but since the early part of 1920, Dr. Stansfeld, one of the Assistant Lady Medical Officers, has taken a share of the work of this Clinic, and gives one, and occasionally two, half-days in addition. Much importance is attached to the treatment of enlarged tonsils and adenoids, the neglect of which may lead to permanent ill health and physical deficiency. Deafness, imperfect development of chest, Tuberculosis and dulness of intellect are frequent complications of this condition.

The arrangements for operation require much care and consideration. Anæsthetics are given in all cases, and it is necessary for suitable accommodation to be provided for the recovery of the patient. For this purpose, couches are placed in an adjoining room. It would be an advantage, however, to have one or more beds available in severe and complicated cases requiring medical supervision and nursing during convalescence.

Following up and after care treatment including breathing and remedial exercises, appropriate dental work and attention to general and personal hygiene form an essential element in the successful treatment of these cases.

Minor Ailments.

The diseases and defects included in this group are ringworm, scabies, impetigo, and other skin diseases, minor injuries, otorrhœa and some external eye disorders. These ailments interfere considerably with regular school attendance, and, therefore, cause a loss in grant. Three half-days a week are devoted by the Medical Officers to the examination of "special" cases, which includes the examination and treatment of minor ailments. A School Nurse is now also in daily attendance at the Clinic in order to deal with trivial and minor ailments not requiring the skilled attention of a Medical Officer. These Nurses also attend at the Minor Ailment Clinic. The treatment of scabies is undertaken by School Nurses at the Cleansing Station of the Sanitary Authority, an arrangement which works satisfactorily. At present ringworm is treated at the minor ailment clinic, the children are excluded from school until the treatment is complete.

The Education Authority has had under consideration for a considerable time the provision of X ray treatment, but up to the present time it has not been found possible to adopt this mode of treatment for ringworm.

Mentally and Physically Defective Children.

Table III. gives a numerical return of all exceptional children at school age in Cardiff. During the year 1920, 38 children were examined and dealt with under the Education Authority's "Arrangements under Section 1 (1) of the Elementary Education (Defective and Epileptic Children) Act, 1899, and Section 31 (1) of the Mental Deficiency Act, 1913." Of these—

Twelve were found not incapable, by reason of mental defect, of receiving benefit from instruction in an ordinary Elementary School, and were certified under Schedule A.

Thirteen were found to be feeble-minded, and as such were certified under Schedule B. to attend the Special Class under the Elementary Education (Defective and Epileptic Children) Act, 1899.

Eleven were found to be imbeciles, and as such were referred to the Local Authority under the Mental Deficiency Act, 1913, and were certified under Schedule C.

There is a great need in this district of a residential school for educable feeble-minded children, and it is to be regretted that the present state of the law does not permit Education Authorities and Local Authorities under the Mental Deficiency Act to combine in the provision of accommodation for defectives of all ages. There seems to be no adequate reason why this combination should not be secured. The Board of Control are pressing Local Authorities to provide colony accommodation for the Mentally Defectives for whom they are responsible, whilst the Board of Education are asking Education Authorities to provide Residential Schools for Mentally Defective Children who are educable. By a judicious combination of both Authorities, suitable institutional treatment of all classes of the mentally defective could be provided on efficient and economical lines. It is understood that the Board of Control has submitted this question to the Ministry of Health, holding the view that combination between two Authorities is very desirable, and that the matter was referred to the Law Officers of the Crown, who have decided that such combination would be illegal.

Special Schools.

These schools comprise (*a*) School for Blind Children, including the partially Blind; (*b*) School for Deaf Children, including the partially Deaf; (*c*) Classes for Educable Mentally Defective Children.

1. The School for Blind Children is located in rooms attached to Marlborough Road Council School, where there is certified accommodation for 30 children. The number of children on the registers is 19. The School has, therefore, sufficient accommodation for the present needs.

2. The School for Deaf Children is in Howard Gardens. The accommodation is for 40 children, which is sufficient for the present needs.

3. The Classes for Mentally Defective Children are held at Virgil Street Council School, which has accommodation for 25 boys and 25 girls.

These Special Schools are inspected at regular intervals by the School Medical Officers, and a numerical return of all exceptional children in Cardiff is given in the attached tables.

Physically Defective Children, including Children for whom an Open-Air School is Desirable.

No special provision has yet been made for these children, but the Education Authority has under consideration the provision of Open-air Schools when local and general conditions permit the construction of the new schools, which are urgently needed in this district. In a few of the

Elementary Schools, open-air classes are held in the play-grounds, but this does not meet the requirements of the case. Large numbers of children are now attending Elementary Schools, who cannot, by reason of physical defect, derive full advantage from the education in an ordinary school. An open-air school should be situated on the outskirts of the town, within easy reach of tram-car service, and be of a permanent character, and should comprise suitable class and rest rooms, with dining room (open to the air on the south side), kitchen, bath room, teachers' room, medical inspection rooms, cloak rooms, etc. An open-air school is an urgent necessity, and the duty of establishing certified schools for boarding and lodging physically defective and epileptic children, will, in a few years, devolve upon Education Authorities, who should, therefore, lose no time in completing their arrangements, in order to comply with their statutory duty when the appointed day arrives for making this provision.

Clothing and Footgear.

In the course of routine and special medical inspection, 54 children were found to be insufficiently clad, to be wearing dirty clothing, or to have unsatisfactory footgear. Of these 54 children, 36 were insufficiently clad, 12 were wearing dirty clothing, and 30 had unsatisfactory footgear.

Juvenile Employment.

I am indebted to Mr. B. Williams, Juvenile Employment (Education) Officer, for all the information given under this heading. In addition to the attached tables, Mr. Williams has supplied a large amount of the most useful information, showing the excellent work now performed by the Juvenile Employment Committee, especially since the New Bye-Laws came into operation in September, 1920. He informs me that at the time these Bye-Laws were being revised, an enquiry was instituted through the Head Teachers of the Schools, and that 1,556 children were traced who were employed part-time in addition to attending school, but it is estimated that there were altogether about 2,000 children so employed. Under the New Bye-Laws, no child under the age of 12 years can be employed in part-time. Street trading, which formerly was allowed to a child over 12 years of age, is now restricted to boys over the age of 15 years, and girls over the age of 16 years. The total number of children now in general employment is 854, as against approximately 2,000 under the old conditions, whilst the number of street traders is now 51, as against 300 under the old conditions. Under the new Bye-Laws, the maximum number of hours that a child may work is 17, made up of 2 hours on each evening between 5 p.m. and 7 p.m. from Monday till Friday (while the school is open), 5 hours on Saturday, and 2 hours on Sunday. The 2 hours on Sunday are only allowed in the case of delivery of milk and delivery of newspapers, and, as will be seen from the attached table, the maximum number of hours for over 90 per cent. of children holding employment cards is 15 hours per week, as against 21–28, and even 56 hours under the old conditions. School children desiring to be employed in part-time, have to be registered and to hold an employment card. Those excluded from school by the School Medical Officer cannot hold employment cards. The performance of children between 10 and 14 years of age in premises licensed under the Public Entertainment Laws is restricted to those licensed for such performance by the Local Education Authority, who have to satisfy themselves as to the age of the child and the manner in which the child will be educated when on tour. Each child is examined by one of the School Medical Officers prior to licensing, and is re-examined every three months while holding such licence. The Education Authority has also to approve of the dressing room accommodation which is allocated to the child, with special reference to the sanitary conditions thereof. The Head Teachers of the Elementary Schools invariably report unfavourably upon the effect of the employment of children out of school hours. They consider that this constitutes one of the greatest hindrances to the educational progress of the child, and that when the necessary hours of employment are long, the effects of the curtailment of the necessary period of sleep are clearly discerned in the inactive.

Medical Examination of Teachers.

On instructions from the Education Committee, the medical examination of newly appointed and pupil school teachers is carried out by the Assistant School Medical Officers. During the year 1920, 94 teachers and pupil teachers were examined, and 10 re-examinations were made.

Dr. H. Sheasby submits the following remarks :—

Enlargement of the Thyroid Gland in School Children.

During the year special attention has been paid to enlargement of the thyroid gland in school children, its prevalence noted and treatment given in a number of cases where the child was not under its own doctor.

Of the 12,013 children examined, 67 were found to have well marked enlargement of the gland, *i.e.* 0·55 per cent. This figure compares favourably with those published by other School Medical Inspectors, where records have been kept.

Leicester (1919)	1·8 per cent.
Derby (1918)	1·7 ,,
Northampton	0·53 ,,
Cheshire	8 ,,
Bath (1918–1919)	1 ,,

As is well known, the gland enlarges in a good many children at puberty ; this is especially so in girls. The enlargement may persist for months, but usually subsides without any treatment. In the series of cases here dealt with, the enlargement had persisted for several months, and was often associated with other indications of ill-health.

Twenty-five occurred in boys	37·3 per cent.
Forty-two occurred in girls	62·7 ,,

So important is the influence which the thyroid secretion exerts over the human metabolism, that any departure from the normal in school children would appear to warrant closer attention being given to it than has hitherto been the case. It has been truly said that " the thyroid gland is to the human body what the draught is to the fire ; nay more, its iodine, by its chemical interaction with certain unknown constituents of the cells, is the match which kindles it."

The thyroid gland enlarges in response to a call by the body for an increased supply of its secretion. What the exciting agent is which gives rise to these toxic goitres in children is not clear ; but it would appear that the toxin, circulating in the blood, is absorbed from the bowel. This view is supported by the beneficial effects of intestinal antiseptics in these cases, which are readily influenced by bowel disinfectants, such as salol, or by giving thyroid extract, which presumably relieves the thyroid of the extra call put upon it, and removes the necessity for enlargement and increased secretion.

Experiments on animals and fish by different workers on the cause of thyroid enlargement, have shown the steps through which the gland passes when submitted to some disturbing factor, giving rise to enlargement. A state of active secretion is initiated, which gradually merges into one of abnormally active secretion. The cellular elements of the gland are altered in size and number, and if the disturbing factor continues to act, degeneration of the cells sets in, followed by the formation of scar tissue (fibrosis) and cyst formation.

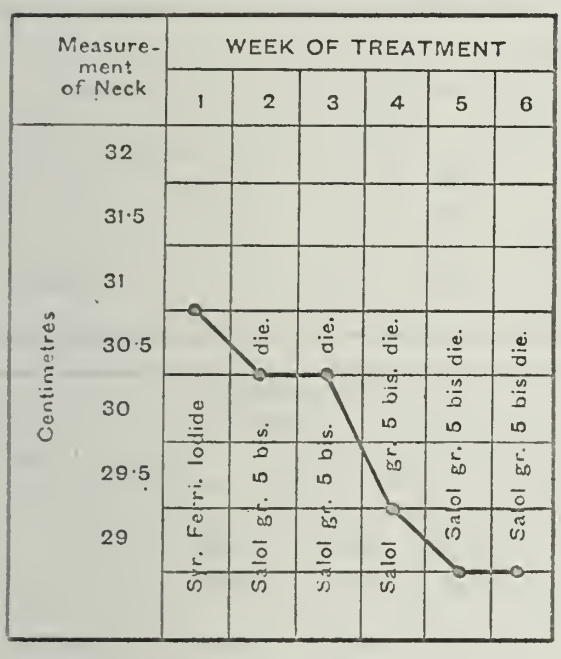
It is thus seen that a toxic goitre may, if the exciting cause continues to act and the condition is untreated, pass into an atrophied gland, a cystic goitre or a bronchocele. When this event has taken place, the individual so affected may suffer from the serious disabilities associated with an atrophied and defective thyroid gland, or from an unsightly swelling in the neck, which may at any time give rise to serious or fatal pressure symptoms by interference with respiration.

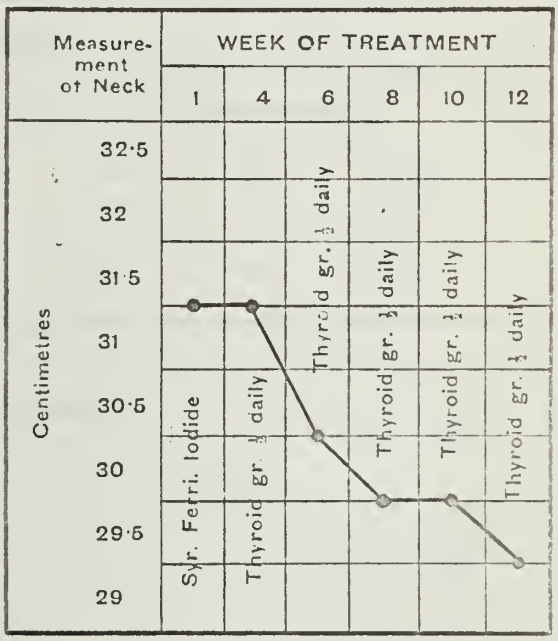
It was from a consideration of these degenerative changes, as shown to take place in experimental animals, that it was deemed advisable to urge the parents of goitrous children to seek further advice, and where this was not practicable, the children were given advice and treatment at the School Clinic.

Of the 23 goitrous children treated, all can be said to have benefited. The earlier the case, the more marked the improvement, that is when treatment is given before fibrosis and cystic

changes had supervened. In two cases where the swelling was due to definite cyst, there was no diminution in the enlargement, although the general health improved. The drugs used were Syrup of Iodide of Iron, Salol, grains five, two or three times daily, or Thyroid Extract, starting at half grain daily, and increasing the dose if necessary. The parent was also advised to pay special attention to keeping the child's bowels regular. In two cases there was old standing diarrhœa with slimy stools, which cleared up under Salol, and the goitre subsided. Measurements in centimetres were taken at a fixed point on the neck over the maximum area of swelling and records kept. Inspection of figures of measurements does not always convey as well as examination with the eye and hand the diminution in the size of a swelling in a child's neck; moreover, measurements are complicated by the fact that the child's general health improves and the neck increases somewhat in size from this cause.

Charts Shewing the Effect of Treatment in Typical Cases.





Examination into the family histories of the 23 cases treated showed the frequency with which more than one member of the family was affected. Seventeen gave a history of this kind, and the relationship is shown in the following table:—

Patient	Father	Mother	Sister	Brother	Grandparents
L. M.	...	×	×	...	...
P. G.	...	...	...	×	...
L. G.	...	...	...	×	...
K. K.	...	...	×	...	×
E. H.	...	...	×	...	...
A. B.	...	...	×	×	...
B. E.	...	...	×	...	...
W. R.	...	×	...	...	...
W. M.	...	×	×	...	...
H. M.	...	×	...	...	...
R. S.	...	×	×	×	...
L. F.	...	×	...	...	...
D. M.	...	×	×	...	...
B. G.	×	...	...	...	...
S. S.	...	×	× ×	...	...
T. H.	...	...	× ×	...	...
L. K.	Aunt	...	...	...	×

No evidence of consanguinity in the parents was obtained in any of the cases.

This enquiry has been greatly facilitated by the co-operation of the other members of the School Medical Staff

TABLE I.

Number of Children Inspected 1st January to 31st December, 1920.

A.—Routine Medical Inspection.*

Elementary Schools.

Age.	Entrants.					Total.
	3	4	5	6	Other ages	
Boys	18	568	962	471	167	2,186
Girls	15	556	1,044	589	189	2,393
Totals	33	1,124	2,006	1,060	356	4,579

Age	Intermediate Group		Leavers				Total	Grand Total
	8	9	12	13	14	Other ages		
Boys	930	659	1,146	250	1	...	2,986	5,172
Girls	955	494	1,047	244	...	...	2,740	5,133
Totals ...	1,885	1,153	2,193	494	1	...	5,726	10,305

Secondary and High Schools.

Age	12	13	14	15	16	Other ages	Total
Boys	391	259	195	101	46	...	992
Girls	290	179	137	67	31	12	716
Totals ...	681	438	332	168	77	12	1,708

B.—Special Inspections.

	Special cases	Re-examinations (*i.e.*, no. of children re-examined.)
Boys	877	360
Girls	1,054	372
Totals	1,931	732

C.—Total Number of Individual Children Inspected by the Medical Officers, whether as Routine or Special Cases (no Child being counted more than once in the year).

No. of Individual Children Inspected	13,944
Actual No. of Re-examinations :—	
Boys	1,744
Girls	1,955
	3,699

*Routine Medical Inspection is medical inspection carried out on the lines of the approved Schedule at the time when Routine Medical Inspection is due, and made on the school premises or other place sanctioned by the Board of Education under the Code.

"Special Cases" are those children referred to the Medical Officers and not due for Routine Medical Inspection under the Code at the time when specially referred. Such children may or may not be of Code-group age, and may be referred to the Medical Officer at the School, or the Clinic by the Committee, Medical Officers, School Nurses, Teachers, Attendance Officers, Parents or otherwise.

TABLE II.

Return of Defects found in the Course of Medical Inspection in 1920.

DISEASE OR DEFECT	ROUTINE INSPECTION.				SPECIALS.*	
	Elementary Schools.		Secondary and High Schools.			
	Number referred for Treatment	Number requiring to be kept under observation, but not referred for Treatment	Number referred for Treatment	Number requiring to be kept under observation, but not referred for Treatment	Number referred to for Treatment	Number requiring to be kept under observation, but not referred for Treatment
Malnutrition	104	4	2	...	16	...
Uncleanliness :—						
Head	251	...	27	...	23	...
Body	74	...	2	...	10	...
Skin :—						
Ringworm :—						
Head	40	...	1	...	145	...
Body	18	...	...	...	112	...
Scabies	54	2	3	...	230	...
Impetigo	70	...	...	...	236	...
Other Diseases (Non-Tubercular)	23	2	4	...	119	...
Eye :—						
Blepharitis	44	...	2	...	37	...
Conjunctivitis	6	...	1	...	10	...
Keratitis	...	...	...	...	3	...
Corneal Ulcer	3	...	...	...	6	...
Corneal Opacities ...	...	...	...	...	4	...
Defective Vision	416	...	90	...	258	...
Squint	61	...	2	...	48	...
Other Conditions ...	6	...	...	...	6	...
Ear :—						
Defective Hearing ...	47	...	12	...	26	...
Otitis Media	64	...	2	...	81	...
Other Ear Diseases ...	11	...	...	...	5	...

TABLE II.—*continued.*

DISEASE OR DEFECT	ROUTINE INSPECTION.				SPECIALS.*	
	Elementary Schools.		Secondary and High Schools.			
	Number referred for Treatment	Number requiring to be kept under observation, but not referred for Treatment	Number referred for Treatment	Number requiring to be kept under observation, but not referred for Treatment	Number referred to for Treatment	Number requiring to be kept under observation, but not referred for Treatment
Nose and Throat :—						
Enlarged Tonsils ...	520	...	63	...	67	...
Adenoids	77	...	...	...	61	1
Enlarged Tonsils and Adenoids	148	1	4	...	77	3
Other Conditions... ...	27	1	1	...	30	1
Enlarged Cervical Glands (Non-Tubercular) ...	6	...	...	...	17	...
Defective Speech	2	...	...	...	7	...
Teeth :—						
Dental Diseases	467	...	63	...	22	...
Heart and Circulation :—						
Heart Disease—						
Organic	12	17	10	...	12	1
Functional	2	21	1	...	10	3
Anæmia	125	2	15	...	42	...
Lungs :—						
Bronchitis	11	133	2	...	79	10
Other Non-Tubercular Diseases	...	9	...	...	4	1
Tuberculosis :—						
Pulmonary :—						
Definite	2	2	...	...	7	...
Suspected	...	1	...	...	19	14
Non-Pulmonary—						
Glands	7	1	...	...	5	3
Spine	...	...	2	...	2	1
Hip	1	...	...	...	2	2
Other Bones and Joints	1	...	...	...	3	1
Skin	...	...	...	...	...	...
Other Forms	1	2	1	...	2	...
Nervous System :—						
Epilepsy	...	...	...	...	6	...
Chorea	2	...	2	...	18	...
Other Conditions... ...	...	3	...	...	9	1
Deformities :—						
Rickets	1	...	1	...	4	...
Spinal Curvature... ...	2	8	1	...	2	...
Other Forms	1	1	...	...	7	...
Other Defects and Diseases ...	38	20	13	...	209	9

Number of Individual Children having Defects which required Treatment or to be kept under observation :—

Elementary Schools	2,087
Secondary and High Schools	243

TABLE III.

Numerical Return of all Exceptional Children in Cardiff in the year 1920.

			Boys	Girls	Total
Blind. (Including partially blind) within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893.		Attending Public Elementary Schools ...	2	2	4
		Attending Certified Schools for the Blind	11	8	19
		Not at School	1	4	5
Deaf and Dumb. (Including partially deaf) within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893.		Attending Public Elementary Schools...	1	...	1
		Attending Certified Schools for the Deaf	17	15	32
		Not at School	3	1	4
Mentally Deficient.	Feeble Minded.	Attending Public Elementary Schools...	3	...	3
		Attending Certified Schools for Mentally Defective Children	24	14	38
		Notified to the Local Control Authority by Local Education Authority during the year	2	1	3
		Not at School	3	2	5
	Imbeciles.	At School	...	...	...
		Not at School	5	7	12
	Idiots.	———	1	1	2
Epileptics.		Attending Public Elementary Schools...	1	1	2
		Attending Certified Schools for Epileptics	...	...	...
		In Institutions other than Certified Schools	...	...	...
		Not at School	2	7	9
Physically Defective.	Pulmonary Tuberculosis.	Attending Public Elementary Schools...	60	43	103
		Attending Certified Schools for Physically Defective Children	...	...	...
		In Institutions other than Certified Schools	...	...	...
		Not at School	15	20	35
	Crippling due to Tuberculosis	Attending Public Elementary Schools ...	1	...	1
		Attending Certified Schools for Physically Defective Children	...	...	...
		In Institutions other than Certified Schools	...	...	...
		Not at School	2	2	4
	Crippling due to causes other than Tuberculosis, *i.e.*, Paralysis, Rickets, Traumatism.	Attending Public Elementary Schools...	46	28	74
		Attending Certified Schools for Physically Defective Children	...	...	...
		In Institutions other than Certified Schools	...	...	...
		Not at School	6	12	18
	Other Physical Defectives, *e.g.*, delicate and other children suitable for admission to Open-Air Schools; children suffering from severe heart disease.	Attending Public Elementary Schools...	100	92	192
		Attending Open-Air Schools	...	...	...
		Attending Certified Schools for Physically Defective Children, other than Open-Air Schools	...	...	...
		Not at School	22	36	58
Dull or Backward.*		Retarded 2 years	380	245	625
		Retarded 3 years	107	85	192

TABLE IV.

Treatment of Defects of Children during 1920.

A.—Treatment of Minor Ailments.

Disease or Defect.	Number of Children.						
	Referred for Treatment	Treated.					
		Under Local Authority's Scheme.				Otherwise	Total
		By School Nurses at Homes of Children	By School Nurses at School Clinic	By School Nurses at Cleansing Station	By Nurses of Queen Victoria Jubilee Nurses' Institute		
Skin :—							
Ringworm—Head ...	201	4	172	...	20	5	201
,, Body ...	142	14	108	2	3	12	139
Scabies	330	19	183	116	2	10	330
Impetigo	909	638	1	...	...	19	658
Minor Injuries ...	6	...	...	...	...	5	5
Other Skin Diseases ...	127	18	82	1	6	20	127
Ear Disease	120	7	54	1	7	29	98
Eye Disease (external and other)	128*	3	42	...	2	19	66
Miscellaneous	221	104	95	1	4	11	215

This Table includes many cases that were not examined by the Medical Officers. Such cases were referred mainly by Head Teachers and when medical attention was not absolutely necessary, the cases were dealt with by the School Nurses.

*Some of these cases were subsequently referred to the Oculist at the School Clinic, and therefore are reported upon in Table IVb. (Treatment of Visual Defect).

B.—Treatment of Visual Defect.

	No. of Children
Referred for Refraction	875
Submitted to Refraction :—	
At the School Clinic	381
By Private Practitioners	1
Otherwise	4
Total	386
For whom Glasses were Prescribed	320
For whom Glasses were Provided	262
Recommended for Treatment other than by Glasses	128
Received other forms of Treatment at the School Clinic	127
For whom no Treatment was considered necessary	123
For whom Glasses were Provided at Half Cost (included in the No. 262 above)	49
Old Cases (Year 1919) for whom Glasses were Provided in 1920...	40

The number of attendances of Vision Cases at the School Clinic during the year was 1,339.

The accompanying Table gives the number of squints and an analysis of the different types of Refractive error found in the 381 cases submitted to Refraction.

Squint	Hyper-metropia	Hypermetropic Astigmatism	Myopia	Myopic Astigmatism	Mixed Astigmatism
128	145	136	42	36	22

C.—Treatment of Defects of Ear, Nose and Throat.

	No. of Children
Referred for Treatment	1,323
Examined by Specialists at School Clinic	840
Received Operative Treatment :—	
At School Clinic 522	
By Private Practitioners 16	
Total	538
Received other forms of Treatment :—	
At School Clinic 255	
By Private Practitioners 12	
Total	267

The number of attendances of Ear, Nose and Throat Cases at the School Clinic during the year was 2,265.

D.—Treatment of Dental Defects.

1.—*Number of Children* (6 *to* 8 *years*) *dealt with.*

(*a*) Inspected by Dentist	1,875
(*b*) Referred for Treatment	1,517
(*c*) Actually Treated	554
(*d*) Re-treated	Nil.

2.—*Particulars of Time given and of Operations undertaken.*

(1) No. of Half-days devoted to Inspection	23
(2) ,, ,, ,, Treatment	52
(3) Total No. of Attendances made by the Children at the Clinic	810
(4) No. of Permanent Teeth Extracted	126
(5) ,, ,, ,, Filled	102
(6) No. of Temporary Teeth Extracted	1,609
(7) ,, ,, ,, Filled	Nil.
(8) Total No. of Fillings	102
(9) No. of Administrations of General Anæsthetics included in (4) and (6)	388
(10) No of Other Operations—Permanent Teeth	Nil.
(11) ,, ,, ,, Temporary Teeth	Nil.

E.—Treatment of Uncleanliness.

Number of Visits made by School Nurses to Schools	193
Average number of Visits to each School	5·2
Total number of Examinations made of children by School Nurses during the year in the Schools	43,455
Number of individual children found unclean	1,487
Number of individual children re-examined by School Nurses in the Schools	613
Number of children found upon re-examination to have been cleansed	506

F.—Treatment of all Other Defects.

Disease or Defect.	Number of Children.			
	Referred for Treatment	*Treated.		
		By Private Practitioners' Hospital, or Tuberculosis Dispensary	Otherwise	Total
Malnutrition	120	67	45	112
Enlarged Cervical Glands	23	7	13	23
Dental Diseases...	552	34	43	77
Diseases of Heart and Circulation...	229	54	60	114
Diseases of Lungs (Non-Tubercular)	96	65	26	91
Pulmonary Tuberculosis	28	25	1	26
Diseases of the Nervous System	37	15	10	25
Deformities	19	5	7	12
Other Defects and Diseases	260	85	98	183

*The figures given relate to children known to have been actually treated. Many others probably received treatment after the visits of the School Nurses.

TABLE V.

Summary of Treatment of Defects as shown in Table IV. (A, B, C, D, and F. but excluding E.)

Disease or Defect.	Number of Children.			
	Referred for Treatment	Treated.		
		Under Local Education Authority's Scheme	Otherwise	Total
Minor Ailments	2,131	1,723	154	1,877
Visual Defects	875	428	24	452
Defects of Ear, Nose and Throat	1,323	777	28	805
Dental Defects	2,069	554	77	631
Other Defects	839	...	688	688
Total	7,237	3,482	971	4,453

*See Foot-note to Table IV. F.

TABLE VI.

SUMMARY RELATING TO CHILDREN MEDICALLY INSPECTED at the Routine Inspections during the year 1920.

(1) The total number of children medically inspected at the Routine Inspections* ...	12,013
(2) The number of Children in (1) suffering from Defects (other than uncleanliness or defective clothing or footgear) who require to be kept under observation (but not referred for treatment)	230
(3) The number of Children in (1) suffering from :—	
Malnutrition	110
Skin Disease	217
Defective Vision (including Squint)	569
Eye Disease	62
Defective Hearing	59
Ear Disease	77
Nose and Throat Disease	842
Enlarged Cervical Glands (Non-Tubercular)	6
Defective Speech	2
Dental Disease	530
Heart Disease :—	
Organic	39
Functional	15
Anæmia	142
Lung Disease (Non-Tubercular)	155
Tuberculosis :—	
Pulmonary { Definite	4
Pulmonary { Suspected	1
Non-Pulmonary	16
Disease of the Nervous System	7
Deformities	15
Other Defects and Diseases	71
(4) The number of Children in (1) who were referred for treatment (excluding uncleanliness, defective clothing, etc.)	1,857
(5) The number of children in (4) who received treatment for one or more defects (excluding uncleanliness, defective clothing, etc.)...	1,090

* "Specials" are not included in this Table.
See foot-note to Table IV.–F.

SPECIAL SCHOOLS.

TABLE VII.

Ages of Children Medically Inspected.

Age	5	6	7	8	9	10	11	12	13	14	15	16	Total
Special School for Mentally Defective Children :—													
Boys	...	...	1	...	2	2	1	6	2	2	2	...	18
Girls	...	...	...	2	...	2	...	2	2	...	8	...	16
Oral School for Deaf Children :—													
Boys	...	...	2	5	1	3	2	2	...	...	1	...	16
Girls	1	...	...	...	4	...	2	3	2	2	1	...	15
School for Blind Children :—													
Boys	2	...	...	2	2	1	1	...	...	2	...	...	10
Girls	...	...	1	...	...	...	2	1	2	1	2	...	9
Totals	3	...	4	9	9	8	8	14	8	7	14	...	84

TABLE VIII.

Return of Defects found in the Course of Medical Inspection of Children attending Special Schools.

Disease or Defect.	Referred for Treatment.			
	Special School for Mentally Defective Children	Oral School for Deaf Children	School for Blind Children	Total
Uncleanliness—Body	2	1	...	3
Otorrhœa	...	1	...	1
Enlarged Tonsils	3	...	...	3
Dental Disease	8	...	...	8
Heart Disease—Organic	...	1	...	1
Skin—Scabies	...	1	...	1
Impetigo	1	1	...	2

No. of Individual Children having Defects which require Treatment 17

TABLE IX.

Ages of School Children Employed out of School Hours.

Period September 13th to December 31st, 1920.

Age.	12	13	14	Total
Boys	269	423	115	807
Girls	7	30	10	47
Totals	276	453	125	854

A child under the age of 12 years cannot now be legally employed.

TABLE X.

Nature of Employment of School Children Employed out of School Hours.

Nature of Employment.	Boys	Girls	Total
Assisting in Shops	13	15	28
Delivery of Bread	9	...	9
Delivery of Milk	30	1	31
Domestic Work	1	4	5
Errands	567	5	572
Miscellaneous	187	22	209
Totals	807	47	854

The hawking of newspapers is illegal except for boys over the age of 15 years. Boys between 15 and 16 years need a licence for this work.

TABLE XI.

Number of Hours of Employment per Week (including Saturday and Sunday) of School Children Employed out of School Hours.

Number of Hours per Week.	Boys	Girls	Total
1	...	...	...
2	4	2	6
3	...	...	...
4	1	...	1
5	42	3	45
6	1	...	1
7	14	...	14
8	2	...	2
9	1	...	1
10	15	2	17
11	2	...	2
12	32	3	35
13	41	3	44
14	28	5	33
15	580	25	605
16	...	...	...
17	44	4	48
Totals	807	47	854

Fifteen hours per week is the maximum number of hours which a child may be employed under the provisions of the Bye-Laws made under the Employment of Children Act, 1903, as amended by the Education Act, 1918, excepting in the delivery of Milk and Newspapers where 2 hours employment is allowed on Sunday mornings, which makes a maximum of 17 hours per week for these two employments.

TABLE XII.

Return of the After Careers of Children formerly attending Special Schools.

	SCHOOL FOR THE BLIND		SCHOOL FOR THE DEAF		SCHOOL FOR THE MENTALLY DEFECTIVE	
	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS
1. Number of Children who have left school during the last five years	15	11	9	13	41	26
2. Number who						
(*a*) have since died	...	...	2	2	2	...
(*b*) are known to be incapable by reason of mental or physical defect of undertaking employment	1	...	...	1	7	2
(*c*) are in attendance at an institution for further education	5	3	...	...	...	...
(*d*) are in any other Institution ...	...	...	...	...	10	7
3. Number who are employed in						
(*a*) Industrial or manual occupations	1	1	4	3	4	...
(*b*) Agricultural or rural occupations	...	...	...	...	...	...
(*c*) Domestic occupations, including those who are helping in the domestic work at home ...	...	2	...	5	...	5
(*d*) Commercial, professional or clerical work	1	...	1	2	1	...
(*e*) Blind alley or other precarious occupations	...	...	...	...	4	...
4. Number who have left the neighbourhood, or whose careers have not been traced	7	5	2	...	13	12

TABLE XIII.

Weekly Wages Earned and Class of Occupation.

Occupation	Weekly Wages.			
	Under £1	Between £1 and £2	Between £2 and £3	Over £3
Industrial or Manual	13	6	2	1
Agricultural or Rural	...	...	...	...
Domestic, including those who are helping in the domestic work at home	2	1	...	...
Commercial, Professional or Clerical work	1	2	2	...
Blind alley or other precarious occupations	3	1	...	...
Totals	19	10	4	1

I have the honour to be,

Ladies and Gentlemen,

Your obedient Servant,

EDWARD WALFORD,

School Medical Officer.